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Original research paper

## THE ECONOMICS AND BUSINESS ELECTIVE: GRAMMAR SCHOOL STUDENTS' PERSPECTIVE\*

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### ABSTRACT

The *Economics and Business* elective was introduced into the third grade of grammar school in the school year of 2020/21. It was designed to improve grammar school students' economic literacy and support the development of their interest in this field. During the third year of this program's implementation, an evaluative mixed-method study was conducted based on the perspectives of the key school actors. This paper analyzes grammar school students' opinions and experiences regarding the content and implementation of learning activities encompassed by the *Economics and Business* elective. The research involved 371 third- and fourth-grade students from 21 grammar schools in which the program was implemented. A questionnaire was constructed based on the instructions for program implementation. The results showed that students most frequently opted for this program due to their interest in the themes covered. *Money* and *Entrepreneurship* were highlighted as the themes featuring the most interesting, practical, and useful content. The teaching practices applied supported inquiry- and project-based learning and formative assessment, in accordance with the formal guidelines. For the majority of students, the elective was of great assistance in mastering research skills. Students perceived the knowledge acquired as relevant to their future life, education, and career. The program met the expectations of most students. The conclusion discusses the implications of the findings and suggests directions for future research.

### Keywords:

entrepreneurship, grammar school, inquiry- and project-based learning, formative assessment.

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## INTRODUCTION

Secondary school students are characterized by independence, autonomy, and differentiated interests. Hence, at this level of education, students should be offered programs featuring diverse and specialized content that can help them narrow down their professional interests, gain deeper knowledge, and prepare for further education or employment (Dou & Shek, 2022; OECD, 1999, 2023). Likewise, it is recommended to provide programs that are relevant to students and satisfy their specific interests and aspirations. The education system's failure to recognize adolescent students' needs and interests can lead to a significant risk of these students distancing themselves from learning and school, not reaching their full potential, and ceasing their education (OECD, 2023).

Education systems across Europe and the world apply the principle of electivity by offering multiple elective programs or numerous subjects and specializations within their program (OECD, 2023). The introduction of electives into the grammar school curriculum in Serbia constitutes one of the key reform changes introduced in the school year of 2018/19, together with a shift in the curricular paradigm and the application of an interdisciplinary approach (SROVRS, 2021). This change allowed grammar school students to partially shape their own education by selecting programs aligned with their interests, affinities, and desires. In line with the basic principles of self-determination theory (Assor, 2012; Ryan & Deci, 2000), students should have the opportunity to choose programs that align with their intrinsic motives, goals, and values. This gives students a sense that their school respects their autonomy, which can contribute to their learning motivation.

### The Concept of Electivity at Grammar Schools

In the first and second grades of grammar school, the concept of electivity means that out of the six electives<sup>1</sup> offered by the education system, grammar schools select four, in accordance with their resources, and each student chooses two out of the four available electives. In each program selected in the first grade, students have one class a week and they can choose whether they wish to attend the same programs in the second grade or opt for any other combination of programs the school offers at this level. The possibility of changing one or both electives after the first grade

<sup>1</sup> These programs include: *Language, Media, and Culture; Individual, Group, and Society; Health and Sports; Education for Sustainable Development; Applied Sciences; and Art and Design.*

allows students to examine, explore, and refine their interest in specific topics. In the third grade, there are nine electives available<sup>2</sup> and grammar schools are required to select five. At this level, students likewise choose two electives, but attend two classes a week in each program. Unlike in the first two grades, students cannot switch electives but are required to attend the same programs in both the third and fourth grades (Rulebook on the Grammar School Curriculum, 2020). This allows students to gain deeper knowledge on topics within certain fields/scientific disciplines, which can contribute to the development of career choices significant for their further, tertiary education.

Students receive grades in each of the electives and these grades are factored into the calculation of their GPA. Thus, electives are equal to the core subjects in this respect. Furthermore, the implementation of these programs encompasses two phases, one inquiry-based and one project-based, which are described in detail in the General Guidelines for Implementing Elective Programs (Rulebook on the Grammar School Curriculum, 2020).

### ***The Economics and Business Elective***

The *Economics and Business* elective has been implemented in the third year of grammar school since the school year of 2020/21 due to the fact that electives were introduced successively, starting with the first grade. This interdisciplinary program is meant to contribute to the development of general intersubject competences, including lifelong learning competences, digital competence, problem-solving, cooperation, enterprising qualities, and entrepreneurial tendencies. The aim of this elective is to help students “master the basic notions, concepts, and principles in economics, thus enabling them to understand the essential mechanisms of the laws of economics and the relationships between the individual, the economic system, and the state, along with their roles and interdependence, so they could acquire the knowledge, skills, and attitudes necessary to responsibly and successfully participate in the economy” (Rulebook on the Grammar School Curriculum, 2020: 735). The program is oriented towards the learning process and outcomes. Upon course completion, students are expected to be able to discuss select economics topics employing specialized knowledge; explain the workings of the laws of economics;

<sup>2</sup> These programs include: *Education for Sustainable Development; Art and Design; Applied Sciences 1; Applied Sciences 2; Introduction to Geopolitics; Economics and Business; Religions and Civilizations; Scientific Research Methodology; Modern Technologies*.

draw conclusions about the role of money in economics and everyday life; explain the significance of the market; identify economic phenomena that negatively affect the state of and trends in the economy and population; evaluate the significance and influence of the economy on everyday life; explore the nature and importance of entrepreneurial behavior and skills; explore, analyze, and critically evaluate the results of research in the field of economics; and exhibit a positive attitude towards responsible participation in the economy (*Ibid*, p. 735). Having in mind that the current grammar school curriculum does not include any other electives or core subjects that exclusively deal with economics, this program should contribute to the development of students' economic literacy.

In each grade, there are three themes covered within the *Economics and Business* elective. In the third grade, students learn about *Money*, *The Market*, and *Entrepreneurship*, while the themes explored in the fourth grade include *The State's Economic Role*, *Measuring Economic Success*, and *Applied Economics* (Rulebook on the Grammar School Curriculum, 2020). The nature of the themes allows for their observation from multiple perspectives and in different temporal and spatial frameworks. The number of classes per theme and the order of lessons are not predefined. The recommended (key) concepts<sup>3</sup> only serve as guidelines, with the teacher having the freedom to supplement the content using various forms of stimulation in the learning environment to initiate a discussion on the given topic. The teacher is expected to guide and direct students' inquiry- and project-based learning processes and ensure the achievement of the expected outcomes. Students are free to choose activities and use diverse sources of information while employing a critical approach to source selection. The learning process relies on students' personal interests as well as their knowledge and experiences stemming from other subjects, having in mind the significant cross-curricular links between this program and other electives, as well as the core subjects. The importance of cross-curricular connections is magnified by the fact that there are no textbooks or other didactic materials specifically designed for elective programs.

This elective requires the kind of teacher preparation that can ensure the provision of adequate support to students in different phases of inquiry- and project-

<sup>3</sup> For instance, within *The Market* as a theme covered in the third grade, the key concepts are: *markets and competition; the goods market; market competition; monopolies; oligopolies; monopolistic competition; capital and land markets; the labor market; financial markets; and stock exchanges*. In the fourth grade, within the theme of *Measuring Economic Success*, the key concepts are: *gross domestic product (GDP); unemployment; syndicate; labor productivity; the gray economy; international trade; international trade and the living standard of nations; international trade and transnational companies; foreign exchange rate; foreign exchange market; tariffs; and economic crises*.

based learning, and thus allow the teacher to contribute to the achievement of the expected learning outcomes and the development of students' competences. Likewise, it is crucial for the teacher to be thoroughly familiar with the key characteristics and diverse techniques of formative assessment, considering that student achievement in electives cannot be evaluated via individual oral or written exams. In fact, a distinctive feature of grammar school electives that differentiates them from the core subjects is the fact that teachers predominantly monitor and assess students' achievement through group activities.

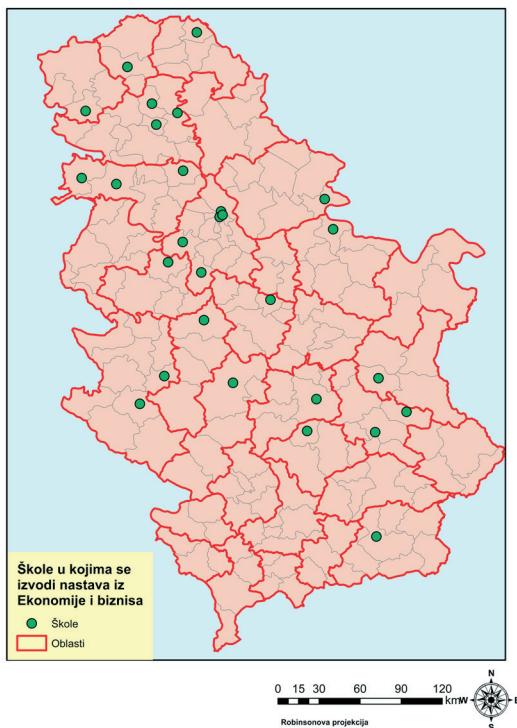
The *Economics and Business* elective is unique in that it can be exclusively taught by economics teachers, that is, persons who satisfy the requirements for teaching specialist subjects at vocational schools in the Economics, Law, and Administration area of work (the field of Economics) (Rulebook on the Degree and Type of Education for Teachers, Professional Associates, and Teaching Assistants at Grammar Schools, 2022). Considering that grammar schools provide a general education and their staff does not normally include economics teachers, grammar schools that choose to offer the *Economics and Business* elective need to hire new teachers with the aforementioned qualifications, which can affect their decision on whether to include this program in their elective course package.

To the best of our knowledge, no empirical research has evaluated electives introduced into grammar schools within the latest education reform. Hence, we conducted an evaluative mixed-method study of the *Economics and Business* elective based on the perspectives of grammar school students, teachers, and principals (Malinić et al., 2024b). This paper is dedicated to the examination of grammar school students' opinions and experiences regarding the content and implementation of learning activities encompassed by this elective. Specifically, the research aims were oriented towards analyzing: 1) reasons for program selection; 2) student opinions about program content and themes; 3) student experiences with teaching practices and assessment during program implementation; as well as 4) students' opinions about the program's key characteristics. Studies of this kind are valuable as student perceptions of a school program constitute a crucial indicator of a reform initiative's success (Dou & Shek, 2022).

## METHOD

*Sample.* The research involved 371 students from 21 grammar schools<sup>4</sup> in the Republic of Serbia, 244 (65.8%) of whom were female and 122 (32.9%) of whom were male. Five students (1.3%) did not wish to disclose their gender. At the time of the research, 173 students (46.6%) were third-graders and 198 (53.4%) were fourth-graders attending this elective.

FIGURE 1. The distribution of schools in Serbia in which the *Economics and Business* Elective was implemented in the school year of 2022/23



*Instrument.* A student questionnaire was constructed for the purpose of this research. In addition to the basic demographic questions about gender, age, and grade of grammar school, it included questions grouped into broad thematic categories. The first category featured both open-ended and closed-ended questions related to program selection reasons and ways of learning about the program. Within this

<sup>4</sup> According to the available data, in the school year of 2022/23, the *Economics and Business* elective was implemented in 31 schools in Serbia. Out of the total number of schools, two refused to participate, whereas four were excluded from the research due to their inability to complete the process of collecting student responses for objective reasons. This led to the attrition of the representative sample, as these schools had a large number of students attending this program. The four schools located in the Autonomous Province of Kosovo and Metohija were not included in the research due to severe communication difficulties.

category, students were also asked about the other elective they attended and their reasons for selecting it. This question was asked to establish whether students chose programs compatible with *Economics and Business* in terms of content. The second category pertained to the evaluation of the themes encompassed by the elective. For each of the themes, there was a list of statements related to whether the content was understandable, clear, interesting, useful, and applicable, as well as whether it lent itself to integration with other subjects. Students used a five-point Likert-type scale to indicate the degree to which they agreed or disagreed with each statement (1=completely disagree to 5=completely agree).

Due to the nature of the study, students were also expected to evaluate teaching activities and the mode of assessment within this elective. Hence, the third category of questions included items about different teacher activities and behaviors related to the preparation and implementation of the program (21 items – e.g., *Encourages us to discuss the products of our research*), along with items regarding the monitoring and assessment of student work (10 items – e.g., *We are familiar with the criteria based on which the teacher monitors and assesses our work*). Students used a five-point Likert-type scale to express the degree to which they agreed or disagreed with each item (1=completely disagree to 5=completely agree). Scale reliability was excellent and amounted to  $\alpha=.93$ .

Students also responded to questions about their professional interests and entrepreneurial intention; that is, they were asked about the university degree they would like to pursue and the occupation they aspire towards, as well as whether they see themselves starting their own business in the future. Likewise, they were asked to list the greatest benefits of attending the *Economics and Business* elective and the degree to which this program helped them develop their research skills. Finally, the questionnaire included questions about the elective's characteristics (upsides and challenges in its implementation), along with a question about suggestions for its improvement.

*Research Process.* The research was conducted at the 21 participating grammar schools during May 2023. Students filled out the questionnaire online through Google Forms. Teachers of the *Economics and Business* elective forwarded the questionnaire access link to their students after consents were obtained from grammar school principals, students, and their parents.

*Data Analysis.* Data processing was executed using SPSS 20.0 and involved an analysis of descriptive statistics (percentages and frequencies, measures of central

tendency, and measures of dispersion – range and standard deviation). A factor analysis was conducted to assess the dimensionality of the scale used. Within inferential statistics, correlation and one-way analysis of variance were applied. A content analysis was conducted to categorize student responses to open-ended questions (Patton, 2015). After the research material was read, textual data were divided into smaller units of analysis (e.g., words or sentences), which were inductively coded. The coding process was accompanied by an analysis of the frequency of the obtained response categories.

## ■ RESULTS

*Program Selection.* Students were asked why they opted for the *Economics and Business* elective. Provided in the questionnaire were five potential reasons for program selection. For each item, students indicated whether the reason in question affected their choice. The distribution of student responses is shown in Table 1.

TABLE 1. Reasons for selecting the *Economics and Business* elective

Listed below are some of the potential reasons for choosing to attend the <i>Economics and Business</i> elective. For each reason, indicate whether it affected your choice.	N	%
I like the content/themes covered in this program.	335	90,3
I need it for future education or employment.	187	50,4
Because most of my friends chose this program.	197	53,1
Because of my parents or other close people in my life.	31	8,35
Because of the teacher of this program.	128	34,5

As expected, the most common reason was an affinity for program themes and content. Slightly more than half of the students chose to attend this program because of their peers, while half of the participants stated that their reason for program selection was its significance for their further education and further employment. About one in three participants stated that their choice was affected by the teacher of the program, whereas parents and other close persons constituted the least common reason for program selection.

In addition to *Economics and Business*, grammar school students attended another elective. Out of all programs available in the third and fourth grade, *Introduction to Geopolitics* was the most common second elective (chosen by 33.4% of participants). In terms of reasons for program selection, the distribution of

responses was almost the same as in the case of *Economics and Business*. The only difference was that students more often chose *Introduction to Geopolitics* because of the teacher of the elective (30.5%) than because of its importance for their further education or further employment (28.6%).

Students were further asked to state how they informed themselves about the *Economics and Business* elective. Most of them (57.9%) reported receiving information from their homeroom teacher or other teachers at their school (e.g., in person during classes, online via the Zoom platform or other platforms organized by the school, or via leaflets and polls), whereas almost one in four students (24.8%) learned about the program from their peers/older students at their school or other acquaintances. Some students independently searched for information on the school website (7.6%), whereas a notable percentage of students sought no information at all before selecting the program (7.9%).

*Program Content.* The next step in the analysis pertained to the perception of program content. Students were asked to state their opinions about the content of each of the six themes covered. More precisely, the aim was to determine whether they found the content interesting, clear, understandable, useful, and applicable, as well as whether they recognized the possibility of its correlation with the content of other school subjects. All participants evaluated the themes covered in the third grade, whereas only fourth-graders evaluated the content covered in the fourth grade. For each theme, a group score was calculated based on content-related items<sup>5</sup>. The score values are presented in Table 2.

TABLE 2. Group score values for themes within the *Economics and Business* elective

Theme	N	Min	Max	AS	SD
1. Money	371	10	35	27,33	5,31
2. The Market	371	11	35	25,75	6,03
3. Entrepreneurship	371	8	35	27,09	5,77
4. The State's Economic Role	191	8	35	25,24	5,99
5. Measuring Economic Success	190	9	35	24,87	5,94
6. Applied Economics	189	11	35	26,79	5,67

The mean score values indicate that the content covered in the third grade (the first three themes) was generally more positively evaluated compared to fourth-grade content (the remaining three themes). Students found *Money* to be the most

<sup>5</sup> Negatively formulated items were recoded prior to the calculation of group scores.

interesting, clearest, and most understandable theme. They perceived its content as most applicable to everyday life, while also stating that they could link it to what they learned in other subjects. *Entrepreneurship* received a slightly lower score, whereas *The Market* was evaluated least favorably out of all the third-grade themes. Out of the three fourth-grade themes, *Applied Economics* received the highest score, followed by *The State's Economic Role*, whereas *Measuring Economic Success* received the lowest score.

The results of the analysis of score values for individual items showed that the theme of *Entrepreneurship* featured the most interesting content (AS=4.06; SD=1.16), *Applied Economics* was the theme with the clearest content (AS=4.17; SD=1.08), *Entrepreneurship* (AS=3.91; SD=1.21) and *Money* (AS=3.91; SD=1.20) encompassed content that was most useful for further education, the theme of *Money* (AS=3.92; SD=1.11) featured content that was most applicable to everyday life, whereas *Applied Economics* received the highest score in terms of correlations with other subjects (AS=3.08; SD=1.35).

Table 3 features group score correlation coefficients for the three third-grade themes based on the evaluations of *all participants in the sample*. The correlations were statistically significant, positive, and strong, with the strongest correlation observed between the themes of *Money* and *The Market*.

TABLE 3. Group score correlations: all students' evaluations

Themes	The Market	Entrepreneurship
Money	.786**	.738**
The Market		.744**
Entrepreneurship		

*Note.* N=371, \*\*correlations are statistically significant at the 0.01 level.

Likewise, the Pearson correlation coefficient revealed statistically significant correlations between the third-grade themes' group scores when considering *only the evaluations of third-grade students* ( $p<.01$ ). The correlations were positive and strong. Once again, the strongest correlation was observed between the themes of *Money* and *The Market* ( $r=.808$ ). The correlation between the themes of *Money* and *Entrepreneurship* amounted to  $r=.783$ , and the correlation between the themes of *Entrepreneurship* and *The Market* was  $r=.743$ .

Correlation coefficients of all six themes' group scores based on *fourth-grade students' evaluations* are shown in Table 4. All correlations were statistically significant and positive, ranging from moderately strong to strong. The strongest

correlation was observed between the themes of *The State's Economic Role* and *Measuring Economic Success*, whereas the weakest correlation was found between the themes of *The Market* and *Applied Economics*.

TABLE 4. Correlations between theme scores based on fourth-graders' evaluations

Themes	The Market	Entrepreneurship	The State's Economic Role	Measuring Economic Success	Applied Economics
Money	.770**	.702**	.670**	.673**	.655**
The Market		.734**	.745**	.743**	.640**
Entrepreneurship			.692**	.709**	.667**
The State's Economic Role				.819**	.665**
Measuring Economic Success					.668**

Note. N=191, \*\*correlations are statistically significant at the 0.01 level

*Teaching Practices and Assessment.* This segment pertained to the analysis of student evaluations of teaching and assessment practices within the *Economics and Business* elective. The goal was to determine whether *Economics and Business* classes were characterized by activities and teacher behavior that supported the implementation of both formally recommended phases of the learning process (inquiry-based and project-based), as well as whether the assessment process aligned with the didactic-methodical guidelines for elective program implementation. Table in the Supplement (Table S1) shows the basic descriptive indicators for the analyzed items. Notably, students expressed moderate to complete agreement with most statements, which can be interpreted as a reliable indicator of the application of teaching and assessment practices that align with the guidelines for the implementation of this elective. In line with this finding, the negatively formulated items (5, 9, 13, 19, 25, and 30) received low average scores (ranging from 1.67 to 2.25), indicating that students mostly did not observe such practices in class. However, it should be noted that the score obtained for item 26 (Table S1) showed that students expressed different opinions on whether their teacher encouraged peer assessment in *Economics and Business* classes.

To examine the latent structure of students' attitudes towards teaching and assessment practices within this elective, a principal component factor analysis with Varimax rotation was conducted. Four factors were identified that explained 60.35% of the total variance, as shown in Table 5. The factor loading matrix is shown in Table 6.

TABLE 5. Four-factor solution parameters

Factors	Applied Economics	% of variance	Cumulative % of variance
Supporting Students' Inquiry- and Project-Based Learning and Behavior	9.409	30.353	30.353
Learning-Oriented Assessment	3.607	11.635	41.988
Teachers' Cognitive and Emotional Support	3.101	10.002	51.990
Shared Ownership of the Grade	2.590	8.356	60.346

TABLE 6. Factor loading matrix

Items	Factors			
	1	2	3	4
7. Points out how and where we can apply what we have learned during the research/project.	0.809			
6. Explains how we should conduct the research (e.g., how to collect, process, and present the data).	0.780			
8. Teaches us how to recognize what is important in the research/project.	0.775			
1. Encourages us to participate in defining the research aim/question.	0.774			
4. Encourages us to draw conclusions about the content covered.	0.769			
10. Helps us understand the mistake we made.	0.768			
11. Guides us in solving problems that arise when conducting the research/project.	0.764			
16. Encourages us to discuss the products of our research.	0.752			
12. Advises us to use different sources of information (e.g., literature and interviews) to complete our tasks during the research/project.	0.730			
2. Encourages us to choose what and how to research.	0.722			
14. Explains everything that may be unclear to us.	0.694	0.325		
18. Encourages us to provide argumentation for our attitudes/opinions.	0.689			
15. Advises us to plan our time for preparing and conducting the research/project.	0.681			
17. Employs different forms of stimulation in class (e.g., digital tools, video content, photographs, and famous quotes).	0.660			
20. Respects our opinions and suggestions in class.	0.600	0.525		
21. Helps us resolve interpersonal conflicts if they arise.	0.578			
3. Encourages us to work in groups depending on the theme or the task.	0.564	0.428		
22. We are familiar with the criteria based on which the teacher monitors and assesses our work.	0.362	0.745		
31. The teacher grades us fairly.	0.317	0.731		

Items	Factors			
	1	2	3	4
27. The teacher provides timely feedback on our learning activities and outcomes.			0.661	
23. The teacher consults with students when grading.		0.641		0.377
19. Shows no consideration for our feelings and moods.			0.747	
9. Does not explain how we should use tables, graphs, and diagrams.			0.731	
13. Does not give us an opportunity to voice our opinions.			0.685	
5. Does not explain the key concepts within the theme covered in class.			0.657	
30. The teacher's grading criteria are unclear.		-0.456	0.612	
25. The teacher does not provide feedback on what else we need to learn.			0.543	
26. The teacher encourages students to grade one another.			0.789	
24. Students participate in setting the grading criteria.			0.749	
28. The teacher encourages us to self-assess what and how much we have learned.			0.693	
29. The teacher monitors and assesses what we have learned.	0.308	0.441		0.462

The first factor gathered the largest number of items and explained the greatest percentage of variance, which is why it could be considered paramount in the analysis of students' attitudes towards teaching and assessment practices. The encompassed items pertained to students' opinions and experiences regarding the teacher's focus on supporting students' inquiry- and project-based learning and behavior in class (how to research, define the research question, draw conclusions, resolve problems that may arise, and plan time for preparing and conducting the research), as well as the teacher's supportive behavior in the process (respecting students' opinions and suggestions, giving students the freedom of choice, explaining everything that is unclear, using different forms of stimulation in class, encouraging students to provide argumentation for their opinions, encouraging discussion on the products of research, helping students understand their mistakes, encouraging the use of different sources of information, supporting group work, and helping resolve conflicts). This factor was labeled *Supporting Students' Inquiry- and Project-Based Learning and Behavior*. The second factor comprised the four items related to the teacher's assessment practices. Students were familiar with the assessment criteria, grading was fair, feedback was timely, and students participated in the assessment process. This factor was named *Learning-Oriented Assessment*.

The third factor gathered the six items related to undesirable practices exhibited by the teacher, in terms of both assessment and teaching activities and behavior. This factor was named *Teachers' Cognitive and Emotional Support*. The factor describes a teacher who shows no consideration for students' emotions and opinions, does not explain the meanings of academic concepts and the use of data visualization techniques during the learning process, and does not exercise transparency in the assessment process. The fourth factor encompassed the three items indicating that the teacher gave students the opportunity to participate in setting the grading criteria and decide in the grading process through self-assessment and peer assessment, along with the item indicating that the teacher viewed grading as a process in which learning outcomes are monitored and assessed. This factor was labeled *Shared Ownership of the Grade*.

Factor intercorrelations are shown in Table 7. Nearly all correlations were statistically significant and positive, ranging from weak to moderate. The strongest significant correlation was found between the first and second factors. This means that according to student evaluations, teachers who created an environment that allowed students to engage in inquiry-based learning also opted for the assessment mode that supported students' learning process.

TABLE 7. Factor intercorrelations

Factors	2	3	4
1. Supporting Students' Inquiry- and Project-Based Learning and Behavior	.581**	.381**	.334**
2. Learning-Oriented Assessment		.402**	.174**
3. Teachers' Cognitive and Emotional Support			-.020
4. Shared Ownership of the Grade			

*Note.* \*\*correlations are statistically significant at the 0.01 level.

A correlation analysis was conducted to examine the relationships between factors and theme scores (Table 8). The table shows that correlations differed in intensity, ranging from very weak to moderate. All statistically significant correlations were positive, with the strongest correlation observed between the *Money* theme score and the first factor named *Supporting Students' Inquiry- and Project-Based Learning and Behavior*. All other theme scores showed slightly weaker correlations with the first factor. The weakest significant correlation was observed between the *Measuring Economic Success* theme score and the fourth factor labeled *Shared Ownership of the Grade*. One-way analysis of variance showed that there were no significant differences in perceptions depending on student age.

TABLE 8. Correlations between factors and theme scores

Themes	Factors			
	1	2	3	4
Money	.563**	.391**	.354**	.201**
The Market	.526**	.325**	.318**	.196**
Entrepreneurship	.551**	.362**	.361**	.151**
The State's Economic Role	.539**	.330**	.312**	.209**
Measuring Economic Success	.542**	.280**	.254**	.176*
Applied Economics	.467**	.305**	.327**	-.008

Note. \*correlations are statistically significant at the 0.05 level; \*\*correlations are statistically significant at the 0.01 level.

*Characteristics of the Economics and Business Elective.* The main aim was to discover what students recognized as the main advantages of the program and which shortcomings and challenges they observed in the elective's implementation. Another goal was to identify what students considered most important or relevant out of everything they learned in class and determine how much this program contributed to the development of students' research skills. Finally, students were asked whether the program met their expectations, what their plans for the future were, and whether they had any suggestions for improving this elective.

In terms of the advantages of the Economics and Business elective, students (N=293) positively evaluated the themes covered (8.9%), highlighted the significance of basic knowledge and skills in the field of economics (18.1%), emphasized the benefits of inquiry- and project-based learning in class (13.7%), and stated that the classes were interactive and that the teacher had an important role in this process (8.4%). However, the largest percentage of responses regarding the advantages of the implementation of the Economics and Business elective pertained to the acquisition of functional, useful, and practical knowledge in the field of economics and its significance for students' future life, work, and education (38.4%). Vague, incomplete, or generic responses were given by 12% of the participants.

A total of 205 students shared their observations about shortcomings and challenges in the implementation of this elective. The largest portion of participants (45%) reported observing no flaws or difficulties in the program's implementation. The most common challenges observed (17.1%) fell into the category of organizational issues (the last class during the day, online classes), followed by a lack of practical, field activities (10.2%) and student overload due to overwhelming school work (9.3%). Some students (7.3%) also mentioned boring topics, hard-to-understand

content, excessive use of economics jargon, and the teacher's focus on only one type of content. Misunderstanding the concept of electivity was likewise listed as one of the issues in program implementation.

Responses regarding the greatest benefits of the program were given by 231 students. Most students attributed the greatest relevance to the acquisition of knowledge in the field of economics (64.2%), whereas one in five students valued the practical knowledge and skills they acquired (e.g., devising a business plan). About 10% of responses pertained to positive learning experiences and motivation in *Economics and Business* classes (e.g., they had a good teacher, engaged in collaborative learning, had the freedom to express themselves, and developed new interests). Only 3% of participants perceived no benefits of attending this elective.

Students were further expected to provide suggestions for the improvement of the *Economics and Business* elective, based on their own experience. Out of the 69 responses provided, the majority contained no specific suggestions (72%) but instead reiterated satisfaction with the program. The remaining responses pertained to improving course quality (e.g., reducing course content and devoting more time to projects and research) and conducting learning activities outside the classroom.

The *Economics and Business* elective met the expectations of more than 90% of students. Nearly two in three students (65.5%) stated that the program completely satisfied their expectations, whereas about one in four students (26.1%) reported that their expectations were partially satisfied. Furthermore, most students found the elective to be of great help in mastering research skills, such as setting the research aim/question (53.6%), data collection (67.4%), data processing/analysis (64.7%), data presentation (62.5%), and drawing conclusions (63.9%). Out of the total number of students attending this elective, 10.1% planned to continue their education in the field of economics and enroll in the Faculty of Economics and Business. Nearly the same number of participants (10.6%) did not have a clear vision of their future education trajectory. Regardless of potential education and career choices, more than 70% of students exhibited entrepreneurial intention and planned to start their own business in the future.

## ■ DISCUSSION

The present study aimed to explore grammar school students' opinions and experiences regarding the content and realization of learning activities within the *Economics and Business* elective. The results showed that this program met the expectations of the majority of students and that most of them opted for the elective because of their affinity for the content covered. Reasons for program selection also included students' education and career aspirations. This is in line with the reasons why the elective was introduced into grammar schools, which included supporting the development of students' interests and competences in particular fields. Research focusing on economics curricula in secondary education has shown that the popularity of economics subjects significantly correlates with students' perception of the themes covered as appealing and practical (Berková et al., 2020), as well as students' belief that economics content can be useful to them in their future education and career (van Wyk, 2012). Grammar school students who participated in our research maintained that the *Economics and Business* elective contributes to the acquisition of functional and practical knowledge in the field of economics. They also found this knowledge relevant to everyday life and their future education and career.

The possibility of choosing programs to attend at this level of education is important to students because it supports their autonomy and allows them to make choices and decisions about what they want to learn (Liu et al., 2009; OECD, 2019; Wang et al., 2011). In addition to *Economics and Business*, most participants opted for *Introduction to Geopolitics* as their second elective. This finding is not surprising, considering that economics and geopolitical content often intersect and intertwine, especially in the analysis of historical and contemporary socioeconomic processes (Agnew, 2001; Klement, 2021; Sneddon & Fox, 2012). Geopolitics is generally viewed as one of the key factors shaping contemporary global and regional economic landscapes (Manić, 2018). Together with the historical factor, geopolitics has significantly affected global economic trends and processes throughout history (Stepić, 2016). Hence, it comes as no surprise that students interested in economics also show an interest in content related to geopolitical processes.

Out of all the content covered within the *Economics and Business* elective, *Money* and *Entrepreneurship* emerged as the most positively evaluated themes, with students finding them to be more concrete, practical, and interesting than other

program content. The popularity and appeal of entrepreneurial knowledge can also be attributed to the fact that associated learning activities support the development of skills such as teamwork, dedication, and flexibility (Cheung, 2008). Viewed from a broader perspective, entrepreneurial competences do not hold great importance only at the individual level (e.g., personal economic success), but also at the corporate and social levels (Lackeus, 2015), affecting the development of companies and the state's economy (Gorman et al., 1997; Hindle, 2007; O'Connor, 2008; Jones & Iredale, 2010; Kuratko, 2005). These competences can help secure a foothold in a globalized society with a continuously and rapidly changing labor market (Gibb, 2002). It is important to emphasize that in the present study, most students expressed entrepreneurial intention, which is in line with the observed link between formal education with elements of entrepreneurial learning and entrepreneurial behavior of the youth later in life, as shown in other relevant studies (Badri & Hachicha, 2019; Glomazić et al., 2020; Niklas, 2015; William, 2017). Compared to the themes of *Money* and *Entrepreneurship*, which students perceived as concrete and practical, the themes covered in the fourth grade (especially *Measuring Economic Success*) were less positively evaluated. This can be attributed to the abstract nature of the content or students' lack of prior knowledge in this field. Teachers who participated in the same large-scale study similarly perceived the link between student interest and economics content, emphasizing that students showed more interest in concrete and practical themes compared to more complex and abstract content (Đerić et al., 2025). Finally, the strong and positive correlations between the themes covered within the *Economics and Business* elective indicate that the content was harmoniously organized and interlinked.

Project-based learning of economics content helps students understand theoretical concepts in the field of economics (Linh, 2024) and develop abilities, skills, attitudes, and values that allow them to comprehend global economic challenges (Zatkova, 2015). Through inquiry- and project-based learning, students develop useful skills, such as critical thinking, teamwork, and problem-solving (Linh, 2024; Maros et al., 2023). Czech secondary school students positively evaluated the research skills (e.g., finding, sorting, processing, and discussing information and peer collaboration) they acquired through project-based learning of economics content at school (Chmelárová & Čonková, 2021). This is in line with our findings regarding the contribution of the *Economics and Business* elective to the development of students' research skills. Furthermore, the results of the factor analysis showed

that *Economics and Business* teachers organized inquiry- and project-based learning activities and encouraged students' research behavior. In other words, the learning process should be accompanied by the teacher's explanations of the content (what to research), learning mode (how to research), and expected learning outcomes (Koh et al., 2007), as recognized by our participants. Furthermore, students stated that their teachers encouraged them to set research questions and search for answers, which the literature identifies as a crucial pedagogical instruction (Chin, 2002; Đerić et al., 2021; Rothstein et al., 2015).

In terms of the relationship between program content and teaching practices, the results of the analysis showed that grammar school students' perceptions of the content of the *Economics and Business* elective most strongly correlated with their perceptions of teaching practices in the domain of inquiry- and project-based learning, indicating that teachers' supportive activities contributed to a positive evaluation of program content. Other studies have also shown that students have highly favorable attitudes towards project-based learning of economics-related content, emphasizing the importance of continuous communication with the teacher as the moderator of the learning process (van Wyk, 2012).

The results of the factor analysis showed that *Economics and Business* teachers employed formative assessment practices, with the exception of peer assessment, regarding which students were indecisive. Specifically, students stated that *Economics and Business* teachers assessed their knowledge fairly, which the literature highlights as a crucial characteristic of the process (Stančić, 2020). Likewise, students noted that their teachers monitored their work and provided feedback on their current knowledge level and their progress towards the expected learning outcomes, while also letting them know what they could do to improve their knowledge and skills and learn more effectively, which is in line with the results of previous studies (Black & Wiliam, 2010; Stančić, 2020; van Wyk, 2012). Formative monitoring in project-based learning should be based on clearly defined criteria (that teachers can set in consultation with students), which our participants also deemed important. Considering that student achievement in electives is not assessed via oral or written exams, teachers should employ different monitoring techniques based on which they could adequately assess individual contributions to group work, which constitutes the largest portion of learning activities in class. Hence, the use of peer assessment techniques is desirable because it ensures that both teachers and students monitor and track the learning process and identify evidence of student progress (Kokotsaki

et al., 2016; Krajcik & Blumenfeld, 2006). The General Guidelines for Implementing Elective Programs (Rulebook on the Grammar School Curriculum, 2020) provide instructions for the assessment of group work, presentations, and projects.

Other countries have also encountered obstacles to successfully integrating economics programs into their existing curricula. In the present study, students most commonly highlighted organizational issues, which were likewise recognized by their teachers in a related study (Đerić et al., 2025). Previous research has also identified a lack of resources and time, along with overly extensive curricula (Salas Velasco, 2018). Recent studies have confirmed that different systems struggle with organizational challenges in secondary education due to crowded class schedules and insufficient attention devoted to programs that allow students to acquire diverse experiences and life skills (Education Bureau, 2021).

## CONCLUSION

The *Economics and Business* elective met the expectations of the majority of students who evaluated its different aspects, including program characteristics, program selection and content, and teaching and assessment practices. Program selection was mostly based on students' autonomous motives, that is, grounded in their interest in program content. The themes covered were recognized as interesting, useful, and applicable. The acquired knowledge was perceived as relevant to future life, education, and career, which is particularly important considering that grammar school students are at a life stage marked by the development and reexamination of education and career choices as well as making career decisions that affect professional activities later in life (as cited in Malinić et al., 2024a).

Students' evaluations revealed that the teaching and assessment practices within this program were in line with the formal requirements that regulate and shape the teaching of the *Economics and Business* elective. In other words, the prescribed forms of classwork encourage grammar school students to engage in inquiry-based learning, make choices and decisions regarding their learning process, and satisfy their interests and affinities, all with the support of their teachers. Likewise, students found that the teachers of this elective adopted an assessment approach that supports learning and gives students a sense of ownership of their grades. Based on our findings, we can conclude that this program has the potential to satisfy secondary school students' basic psychological needs.

Future research could focus on measuring students' basic psychological needs (Ryan & Deci, 2000), that is, determining how the acknowledgement and satisfaction of these needs contribute to student motivation and engagement in *Economics and Business* classes. Likewise, it would be interesting to conduct a study on a university student population to gauge this program's contribution to students' education choices. Considering that this study's main limitation lies in the diminishment of the methodologically anticipated sample representativeness due to certain schools' decision to refuse participation, along with the fact that the school year ended earlier than usual, future research could explore the experiences of new generations of students attending this elective, but on a representative sample. Furthermore, the instruments used in this research could be purposefully adapted and employed in the evaluation of other grammar school electives.

Decision-makers could consider creating opportunities for the exchange of good practice examples between teachers of *Economics and Business* and other electives. Furthermore, schools should explore ways to overcome the organizational challenges highlighted by students in order to ensure equal opportunities for conducting elective classes at grammar schools. Finally, teachers should ensure that students have more opportunities to learn through practical and research activities outside the classroom.

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## SUPPLEMENT

TABLE S1. The basic descriptive indicators for analyzed items

	Min	Max	AS	SD
1. Encourages us to participate in defining the research aim/question.	1	5	4.27	0.95
2. Encourages us to choose what and how to research.	1	5	4.34	0.90
3. Encourages us to work in groups depending on the theme or the task.	1	5	4.55	0.83
4. Encourages us to draw conclusions about the content covered.	1	5	4.33	0.90
5. Does not explain the key concepts within the theme covered in class.	1	5	2.02	1.41
6. Explains how we should conduct the research (e.g., how to collect, process, and present the data).	1	5	4.29	0.97
7. Points out how and where we can apply what we have learned during the research/project.	1	5	4.18	1.02
8. Teaches us how to recognize what is important in the research/project.	1	5	4.26	0.97
9. Does not explain how we should use tables, graphs, and diagrams.	1	5	2.25	1.39
10. Helps us understand the mistake we made.	1	5	4.18	1.03
11. Guides us in solving problems that arise when conducting the research/project.	1	5	4.27	0.98
12. Advises us to use different sources of information (e.g., literature and interviews) to complete our tasks during the research/project.	1	5	4.33	1.01
13. Does not give us an opportunity to voice our opinions.	1	5	1.70	1.27
14. Explains everything that may be unclear to us.	1	5	4.47	0.90
15. Advises us to plan our time for preparing and conducting the research/project.	1	5	4.22	1.04
16. Encourages us to discuss the products of our research.	1	5	4.28	0.98
17. Employs different forms of stimulation in class (e.g., digital tools, video content, photographs, and famous quotes).	1	5	4.16	1.08
18. Encourages us to provide argumentation for our attitudes/opinions.	1	5	4.25	0.96
19. Shows no consideration for our feelings and moods.	1	5	1.88	1.26
20. Respects our opinions and suggestions in class.	1	5	4.45	0.94
21. Helps us resolve interpersonal conflicts if they arise.	1	5	4.13	1.12
22. We are familiar with the criteria based on which the teacher monitors and assesses our work.	1	5	4.61	0.80
23. The teacher consults with students when grading.	1	5	4.41	1.00
24. Students participate in setting the grading criteria.	1	5	3.42	1.41

		Min	Max	AS	SD
25. The teacher does not provide feedback on what else we need to learn.		1	5	2.23	1.64
26. The teacher encourages students to grade one another.		1	5	2.91	1.43
27. The teacher provides timely feedback on our learning activities and outcomes.		1	5	4.50	0.94
28. The teacher encourages us to self-assess what and how much we have learned.		1	5	3.90	1.15
29. The teacher monitors and assesses what we have learned.		1	5	4.26	1.03
30. The teacher's grading criteria are unclear.		1	5	1.67	1.17
31. The teacher grades us fairly.		1	5	4.63	0.81

*Note.* N=371